#### (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

### (19) World Intellectual Property Organization

International Bureau



## 

## (43) International Publication Date 23 June 2005 (23.06.2005)

### **PCT**

# (10) International Publication Number $WO\ 2005/057777\ A1$

(51) International Patent Classification<sup>7</sup>: H03B 5/20

(21) International Application Number:

PCT/SE2003/001917

(22) International Filing Date:

10 December 2003 (10.12.2003)

(25) Filing Language:

English

(26) Publication Language:

English

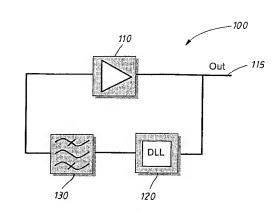
- (71) Applicant (for all designated States except US): TELE-FONAKTIEBOLAGET LM ERICSSON (publ) [SE/SE]; S-164 83 Stockholm (SE).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): GEVORGIAN, Spartak [AM/SE]; Adler Salvius gata 15, S-411 11 Göteborg (SE). JACOBSSON, Harald [SE/SE]; Fullriggaregatan 10A, S-426 74 VÄSTRA FRÖLUNDA (SE).

**LEWIN, Thomas** [SE/SE]; Landstormsvägen 40, S-439 94 Onsala (SE).

- (74) Agent: ALBIHNS GÖTEBORG AB; Box 142, S-401 22 Göteborg (SE).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE,

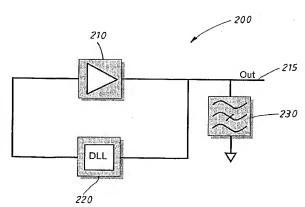
[Continued on next page]

### (54) Title: AN OSCILLATOR CIRCUIT WITH TUNEABLE SIGNAL DELAY MEANS



(57) Abstract: The invention discloses an oscillator circuit (100, 200, 300, 400), comprising an oscillating element (110, 210, 310, 410) and output means (115, 215, 315, 415) for outputting an oscillation frequency from the oscillating circuit. The circuit further comprises a signal delay means (120, 220, 320, 420) which is arranged in series with the oscillating element and feeds the output signal back to the oscillating element. The delay means is (120, 220, 320, 420) tuneable with respect to the delay it provides. The oscillating element can be an amplifier or a VCO, and the delay means can be a Delay Locked Loop or a tuneable delay line, depending on the embodiment of the invention.





### WO 2005/057777 A1



SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

### **Declaration under Rule 4.17:**

— of inventorship (Rule 4.17(iv)) for US only

### Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.